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EXAMINER	
NILANONT, YOUPAPORN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/534,839	SEO ET AL.	
	Examiner	Art Unit	
	YOUPAPORN NILANONT	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of claims:

Claims 1-21 are pending in this Office action.

Claims 1, 8, 12 and 18 are amended.

Response to Arguments

Applicant's arguments filed in the amendments filed 11-13-2009 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6980793) in view of Mimura et al. (US 2001/0021176) in view of Raith (US 6493547).

Regarding claim 1, (Currently amended) Lee discloses an analyzer (Lee, figure 1 “Packet Data analyzing device (IUX) 330”) for packet data traffic transmitted between a subscriber (figure 1 “10”) and a service server (figure 1 “contents server 420”) when the subscriber uses a wireless data service of a specific service server through a mobile communication network (Lee, column 1 lines 57-67 "mobile communication system having a packet data service node connected to a data core network to provide a data

service to a mobile terminal...network being connected to both a contents server that provides contents"), comprising:

a packet data separator that facilitates providing a wireless data service to the subscriber by the service server (figure 2 “Interface Unit 331”) wherein the packet data separator is configured to:

separate user packet data transmitted between: a mobile communication exchange or the packet controller, and the service server, and (figure 3 “Billing Start Data Record (Start UDR), Interim Calculation Data Record (Interim UDR), Billing Stop Data Record (Stop UDR) S10" and "Packet Data S40", column 4 lines 49-56 and column 5 lines 24-29 “discriminate the type of contents provided”; thus, discloses separate user packet data from UDR packets and separate types of packet data)

receive the user packet data only after an RP registration is provided (column 4 lines 37-43 “After the authentication of the mobile terminal 10 is successfully achieved...310 transmits...start UDR...indicates the start of a session...and switches the packet data”, column 5 lines 24-26 “interface unit 331 of the packet data analyzing device 330 receives the copied packet data from the mirroring switch 320”; since mirroring switch only receives packets from packet data service node after authentication, thus the packet data analyzing device which only gets packets from the mirroring switch also only get packets after the authentication as well);

a traffic analyzer for analyzing the user packet data (column 5 lines 26-29 “packet analyzing unit 332 analyzes the packet data...to discriminate the type of contents");

a statistics storage unit for storing and managing result data analyzed by the traffic analyzer (figure 1 "Billing Data Processing Unit (IPMS) 340”, column 5 lines 34-41 “billing data processing unit 340 stores the integrated billing data, processes the integrated billing data”).

Lee does not explicitly disclose that the traffic analyzer also separate the user packet data according to transmission directions and does not explicitly disclose a statistics reference unit for retrieving various data stored in the statistics storage unit, and providing statistical information desired by the subscriber.

Mimura teaches the concept of monitoring the network traffic, identifying communication flow and collecting statistics by monitoring communication flow (Mimura, [0035] “packet switch that implements monitoring communication flows and collecting statistics data”, figure 1 “flow identifying unit 3” and “flow table 4”, [0037] “flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; thus, Mimura’s disclosure separate traffic data according to directions which can be identified by information about source and destination of the packet).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention to have incorporated Mimura’s network traffic statistical data

according to traffic flow directions into Lee's teachings in order to ensure that the server actually provides quality services as guaranteed to paying subscriber (Mimura, [0005]).

Lee in view of Mimura does not explicitly disclose a statistics reference unit for retrieving various data stored in the statistics storage unit, and providing statistical information desired by the subscriber. Mimura discloses sending traffic statistics data to the network management system for further observation ([0042] "delivers the statistics data…sends this data to the network management system") but does not explicitly disclose that the management system allows the subscriber to access statistics data.

Raith discloses a wireless communication system which maintains subscriber's usage information in its database and communicates the current usage information to the subscriber (Raith, column 6 lines 5-26). Usage information may be presented to the subscriber when predetermined condition occurs (column 10 lines 6-11).

It would have been obvious to the person having ordinary skill in the art, at the time the invention was made to have included providing statistical information stored in the storage unit to the subscriber in order to prevent billing dispute from the subscriber and provide subscriber with his current usage associating with account agreement.

Regarding claim 3, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 1, wherein the traffic analyzer separates the user packet data received through the packet data separator into transmit data and receive data, and analyzes the transmit data and the receive data (Mimura, figure 1 "flow identifying unit 3" and "flow table 4", [0037] "The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any

information items can be applied if available for communication flow identification"; it is understood that directions can be identified by using the flow information such as source and destination address of the packet).

Regarding claim 4, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 3, wherein the traffic analyzer analyzes a TCP (transmission control protocol) transmission flow between the service server and the mobile communication exchange or the packet controller through the user packet data (Mimura, [0037] "…TCP layers which are upper than the IP layer may be used").

Regarding claim 5, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 1, wherein the statistics reference unit provides various real-time statistics data analyzed by the traffic analyzer to the subscriber through a GUI (graphical user interface) (Raith, figure 5 "display current cumulative usage information 550", figure 6 "Display usage information at terminal 640", column 9 lines 63-64 "terminal displays an indication of current cumulative usage to a user at the terminal", column 12 lines 25-38 "screen").

Regarding claim 6, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 5, wherein the various real-time statistics data include statistics on communication amounts of receive data, transmit data, and receive and transmit data, access trials for each layer, a number of success times, a number of failure times, and current states, and further include usage statistics for each IP on each application, successful access rate statistics for each service, statistics on response

times, and successful rate statistics on a PPP session for each base station (Mimura [0040-0041]).

Regarding claim 7, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 1, wherein a switching hub for transmitting packets to an appropriate port based on a packet address, and a router for connecting separated networks that use the same transmission protocol, are connected between the packet data separator and the service server (Mimura, figure 3 “34”-“36”).

Regarding claim 8, (Currently amended) Lee discloses a method for analyzing packet data traffic (Lee, column 2 lines 4-12) transmitted between a subscriber (figure 1 “10”) and a service server (figure 1 “contents server 420”) when the subscriber uses a wireless data service of a specific service server through a mobile communication network (Lee, column 1 lines 57-67 "mobile communication system having a packet data service node connected to a data core network to provide a data service to a mobile terminal...network being connected to both a contents server that provides contents"), comprising:

(a) receiving and separating user packet data transmitted between a mobile communication exchange or a packet controller that facilitates providing a wireless data service to the subscriber (figure 3 “Billing Start Data Record (Start UDR), Interim Calculation Data Record (Interim UDR), Billing Stop Data Record (Stop UDR) S10" and "Packet Data S40", column 4 lines 49-56 and column 5 lines 24-29 “discriminate the type of contents provided”; thus, discloses separate user packet data from UDR packets and separate types of packet data), wherein the receiving and separating occurs only

after an RP registration is provided (column 4 lines 37-43 “After the authentication of the mobile terminal 10 is successfully achieved...310 transmits...start UDR...indicates the start of a session...and switches the packet data”, column 5 lines 24-26 “interface unit 331 of the packet data analyzing device 330 receives the copied packet data from the mirroring switch 320”; since mirroring switch only receives packets from packet data service node after authentication, thus the packet data analyzing device which only gets packets from the mirroring switch also only get packets after the authentication as well);

(b) analyzing the user packet data (column 5 lines 26-29 “packet analyzing unit 332 analyzes the packet data...to discriminate the type of contents").

Lee does not explicitly disclose the step of separating the user packet data received in (a) according to transmission directions and providing statistical information desired by the subscriber by using result analyzed data.

Mimura teaches the concept of monitoring the network traffic, identifying communication flow and collecting statistics by monitoring communication flow (Mimura, [0035] “packet switch that implements monitoring communication flows and collecting statistics data”, figure 1 “flow identifying unit 3” and “flow table 4”, [0037] “flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; thus, Mimura’s disclosure separate traffic data according to directions which can be identified by information about source and destination of the packet).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention to have incorporated Mimura’s network traffic statistical data

according to traffic flow directions into Lee's teachings in order to ensure that the server actually provides quality services as guaranteed to paying subscriber (Mimura, [0005]).

Lee in view of Mimura does not explicitly disclose a statistics reference unit for retrieving various data stored in the statistics storage unit, and providing statistical information desired by the subscriber. Mimura discloses sending traffic statistics data to the network management system for further observation ([0042] "delivers the statistics data…sends this data to the network management system") but does not explicitly disclose that the management system allows the subscriber to access statistics data.

Raith discloses a wireless communication system which maintains subscriber's usage information in its database and communicates the current usage information to the subscriber (Raith, column 6 lines 5-26). Usage information may be presented to the subscriber when predetermined condition occurs (column 10 lines 6-11).

It would have been obvious to the person having ordinary skill in the art, at the time the invention was made to have included providing statistical information stored in the storage unit to the subscriber in order to prevent billing dispute from the subscriber and provide subscriber with his current usage associating with account agreement.

Regarding claim 10, (Previously presented) Lee in view of Mimura in view of Raith discloses the method of claim 8, wherein (b) comprises: separating the received user packet data into transmit data and receive data, and analyzing the transmit data and the receive data (Mimura, [0037] "flow identifying…identifies a flow…conditions for communication flow identification stored in the flow table 4 are set by using…Source IP

Address (SIP), Destination IP Address (DIP)"; it is understood that the directions can be identified by using the information about source and destination of the packet).

Regarding claim 11, (Previously presented) Lee in view of Mimura in view of Raith discloses the method of claim 10, wherein a TCP transmission flow between the service server and the mobile communication exchange or the packet controller is analyzed through the user packet data (Mimura, [0037] "…TCP layers which are upper than the IP layer maybe used").

Claims 12, 14-15, 17-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6980793) in view of Mimura et al. (US 2001/0021176).

Regarding claim 12, (Currently amended) Lee discloses a device for monitoring a service for a subscriber (Lee, figure 1 "Packet Data analyzing device (IUX) 330") through an analysis of packet data traffic transmitted between the subscriber (figure 1 "10") and a service server (figure 1 "contents server 420") when the subscriber uses a wireless data service of a specific service server through a mobile communication network (Lee, column 1 lines 57-67 "mobile communication system having a packet data service node connected to a data core network to provide a data service to a mobile terminal...network being connected to both a contents server that provides contents"), comprising:

a packet data separator that facilitates providing a wireless data service to the subscriber by the service server (figure 2 “Interface Unit 331”), wherein the packet data separator is configured to:

separate user packet data transmitted between:

a mobile communication exchange or the packet controller, and

the service server (figure 3 “Billing Start Data Record (Start UDR), Interim Calculation Data Record (Interim UDR), Billing Stop Data Record (Stop UDR) S10" and "Packet Data S40", column 4 lines 49-56 and column 5 lines 24-29 “discriminate the type of contents provided”; thus, discloses separate user packet data from UDR packets and separate types of packet data), and

receive the user packet data only after an RP registration is provided (column 4 lines 37-43 “After the authentication of the mobile terminal 10 is successfully achieved...310 transmits...start UDR...indicates the start of a session...and switches the packet data”, column 5 lines 24-26 “interface unit 331 of the packet data analyzing device 330 receives the copied packet data from the mirroring switch 320”; since mirroring switch only receives packets from packet data service node after authentication, thus the packet data analyzing device which only gets packets from the mirroring switch also only get packets after the authentication as well);

a traffic analyzer for analyzing the user packet data (column 5 lines 26-29 “packet analyzing unit 332 analyzes the packet data...to discriminate the type of contents");

a statistics storage unit for storing and managing result data analyzed by the traffic analyzer (figure 1 "Billing Data Processing Unit (IPMS) 340”, column 5 lines 34-41 “billing data processing unit 340 stores the integrated billing data, processes the integrated billing data”).

Lee does not explicitly disclose that the traffic analyzer also separate the user packet data according to transmission directions and does not explicitly disclose a service monitoring unit for generating information including normality states on the subscriber for each service through various data stored in the statistics storage unit, and providing the information to a manager.

Mimura discloses the concept of monitoring the network traffic, identifying communication flow and collecting statistics by monitoring communication flow (Mimura, [0035] “packet switch that implements monitoring communication flows and collecting statistics data”, figure 1 “flow identifying unit 3” and “flow table 4”, [0037] “flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; thus, Mimura’s disclosure separate traffic data according to directions which can be identified by information about source and destination of the packet). Mimura further discloses a service monitoring unit for generating information including normality states on the subscriber for each service through various data stored in the

statistics storage unit, and providing the information to a manager (Mimura, figure 3 “meter reader 39” and “manager 38”, [0005] “quality of communication” and [0009] “charging and other administrative tasks”, [0042] “sends this data to the network management system”).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention to have incorporated Mimura’s network traffic statistical data according to traffic flow directions and provides state for each service into Lee’s teachings in order to ensure that the server actually provides quality services as guaranteed to paying subscriber (Mimura, [0005]).

Regarding claim 14, (Previously presented) Lee in view of Mimura disclose the device of claim 12, wherein the traffic analyzer separates the user packet data received through the packet data separator into transmit data and receive data, and analyzes the transmit data and the receive data (Mimura, figure 1 “flow identifying unit 3” and “flow table 4”, [0037] “The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; it is understood that directions can be identified by using the flow information such as source and destination address of the packet).

Regarding claim 15, (Previously presented) Lee in view of Mimura disclose the device of claim 12, wherein the traffic analyzer analyzes a TCP (transmission control protocol) transmission flow between the service server and the mobile communication

exchange or the packet controller through the user packet data (Mimura, [0037] "…TCP layers which are upper than the IP layer may be used").

Regarding claim 17, (Previously presented) Lee in view of Mimura disclose the device of claim 12, wherein a switching hub for transmitting packets to an appropriate port based on a packet address, and a router for connecting separated networks that use the same transmission protocol are connected between the packet data separator and the service server (Mimura, figure 3 "34"-"36").

Regarding claim 18, (Currently amended) Lee discloses a method for monitoring a service for a subscriber through an analysis of packet data traffic (Lee, column 2 lines 4-12) transmitted between the subscriber (figure 1 "10") and a service server (figure 1 "contents server 420") when the subscriber uses a wireless data service of a specific service server through a mobile communication network (Lee, column 1 lines 57-67 "mobile communication system having a packet data service node connected to a data core network to provide a data service to a mobile terminal...network being connected to both a contents server that provides contents"), comprising:

(a) receiving and separating user packet data transmitted between a mobile communication exchange or a packet controller that facilitates providing a wireless data service to the subscriber, and the service server (figure 3 "Billing Start Data Record (Start UDR), Interim Calculation Data Record (Interim UDR), Billing Stop Data Record (Stop UDR) S10" and "Packet Data S40", column 4 lines 49-56 and column 5 lines 24-29 "discriminate the type of contents provided"; thus, discloses separate user packet data from UDR packets and separate types of packet data), wherein the receiving and

separating occurs only after an RP registration is provided (column 4 lines 37-43 “After the authentication of the mobile terminal 10 is successfully achieved...310 transmits...start UDR...indicates the start of a session...and switches the packet data”, column 5 lines 24-26 “interface unit 331 of the packet data analyzing device 330 receives the copied packet data from the mirroring switch 320”; since mirroring switch only receives packets from packet data service node after authentication, thus the packet data analyzing device which only gets packets from the mirroring switch also only get packets after the authentication as well);

(b) analyzing the user packet data (column 5 lines 26-29 “packet analyzing unit 332 analyzes the packet data...to discriminate the type of contents").

Lee does not explicitly disclose the step of (b) separating the user packet data received in (a) according to transmission directions, and (c) generating information including normality states on the subscriber for each service through result data analyzed in (b), and providing the information to a manager.

Mimura discloses the concept of monitoring the network traffic, identifying communication flow and collecting statistics by monitoring communication flow (Mimura, [0035] “packet switch that implements monitoring communication flows and collecting statistics data”, figure 1 “flow identifying unit 3” and “flow table 4”, [0037] “flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; thus, Mimura’s disclosure separate traffic data according to directions which can be identified by information about source and destination of the packet).

Mimura further discloses generating information including normality states on the subscriber for each service through various data stored in the statistics storage unit, and providing the information to a manager (Mimura, figure 3 "meter reader 39" and "manager 38", [0005] "quality of communication" and [0009] "charging and other administrative tasks", [0042] "sends this data to the network management system").

It would have been obvious to the person having ordinary skill in the art, at the time of the invention to have incorporated Mimura's network traffic statistical data according to traffic flow directions and provides state for each service into Lee's teachings in order to ensure that the server actually provides quality services as guaranteed to paying subscriber (Mimura, [0005]).

Regarding claim 20, (Previously presented) Lee in vies of Mimura discloses the method of claim 18, wherein (b) comprises: separating the received user packet data into transmit data and receive data, and analyzing the transmit data and the receive data (Mimura, [0037] "flow identifying…identifies a flow…conditions for communication flow identification stored in the flow table 4 are set by using…Source IP Address (SIP), Destination IP Address (DIP)"; it is understood that the directions can be identified by using the information about source and destination of the packet).

Regarding claim 21, (Previously presented) Lee in view of Mimura discloses the method of claim 20, wherein a TCP transmission flow between the service server and the mobile communication exchange or the packet controller is analyzed through the user packet data (Mimura, [0037] "…TCP layers which are upper than the IP layer maybe used").

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6980793) in view of Mimura et al. (US 2001/0021176) in view of Raith (US 6493547) as applied to claims 1 and 8 above, and further in view of Ronneke (US 6515989).

Regarding claim 2, (Previously presented) Lee in view of Mimura in view of Raith discloses the analyzer of claim 1 and discloses separates the user packet data into transmit data and receive data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3" [0036] "IP packets…are input to the input IF 2" and [0037] "The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification"; it is understood that the directions can be identified by using the information about source and destination of the packet).

Lee in view of Mimura in view of Raith does not explicitly disclose the packet data separator has Ethernet access with the service server and with the mobile communication exchange or the packet controller. Though Lee discusses "switch", which is commonly known in the art to have Ethernet access, it does not explicitly discuss Ethernet access.

Ronneke discloses the packet data separator has Ethernet access with the service server and with the mobile communication exchange or the packet controller (Ronneke, column 4 lines 27-31 and 54-62).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention, to have utilized the disclosure of Ronneke, discussing Ethernet link, in the system of Lee in view of Mimura in view of Raith in order to retrieve packets at a physical layer of the network for billing purposes (Ronneke, Abstract).

Regarding claim 9, (Previously presented) Lee in view of Mimura in view of Raith discloses the method of claim 8, wherein (a) comprises: separating the user packet data into transmit data and receive data (Mimura, figure 1 “input interface 2” and “flow identifying unit 3” [0036] “IP packets…are input to the input IF 2” and [0037] “The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)” and “a search key comprising any information items can be applied if available for communication flow identification”; it is understood that the directions can be identified by using the information about source and destination of the packet).

Lee in view of Mimura in view of Raith does not explicitly disclose receiving the user packet data via Ethernet access between the service server and the mobile communication exchange or the packet controller.

Ronneke discloses receiving the user packet data via Ethernet access between the service server and the mobile communication exchange or the packet controller (Ronneke, column 4 lines 24-31 and 54-62, figures 1 and 2).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention, to have utilized the disclosure of Ronneke, discussing Ethernet link, in the system of Lee in view of Mimura in view of Raith in order to retrieve packets at a physical layer of the network for billing purposes (Ronneke, Abstract).

Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6980793) in view of Mimura et al. (US 2001/0021176) as applied to claims 12 and 18 above, and further in view of Ronneke (US 6515989).

Regarding claim 13, (Previously presented) Lee in view of Mimura discloses the device of claim 12, wherein the packet data separator separates the user packet data into transmit data and receive data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3" [0036] "IP packets…are input to the input IF 2" and [0037] "The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification"; it is understood that the directions can be identified by using the information about source and destination of the packet).

Lee in view of Mimura does not explicitly disclose of a separator with Ethernet access with the service server and with the mobile communication exchange or the packet controller. Though Lee discusses "switch", which is commonly known in the art to have Ethernet access, it does not explicitly discuss Ethernet access.

Ronneke discloses the packet data separator has Ethernet access with the service server and with the mobile communication exchange or the packet controller (Ronneke, column 4 lines 27-31 and 54-62).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention, to have utilized the disclosure of Ronneke, discussing Ethernet

link, in the system of Lee in view of Mimura in view of Raith in order to retrieve packets at a physical layer of the network for billing purposes (Ronneke, Abstract).

Regarding claim 19, (Previously presented) Lee in view of Mimura discloses the method of claim 18, wherein (a) comprises: separating the user packet data into transmit data and receive data, and receiving the user packet data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3" [0036] "IP packets…are input to the input IF 2" and [0037] "The flow identifying unit 3…such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification"; it is understood that the directions can be identified by using the information about source and destination of the packet).

Lee in view of Mimura does not explicitly disclose receiving packet data via Ethernet access between the service server and the mobile communication exchange or the packet controller.

Ronneke discloses receiving the user packet data via Ethernet access between the service server and the mobile communication exchange or the packet controller (Ronneke, column 4 lines 24-31 and 54-62, figures 1 and 2).

It would have been obvious to the person having ordinary skill in the art, at the time of the invention, to have utilized the disclosure of Ronneke, discussing Ethernet link, in the system of Lee in view of Mimura in view of Raith in order to retrieve packets at a physical layer of the network for billing purposes (Ronneke, Abstract).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6980793) in view of Mimura et al. (US 2001/0021176) as applied to claim 12 above, and further in view of Pruthi et al. (US 2002/0105911).

Regarding claim 16, (Original) Lee in view of Mimura discloses the device of claim 12. Mimura further discloses statistical information to be measured including several examples of items and suggests that items to be measured are chosen to be items relevant to service provider's contract with user (Mimura, [0040-0041]).

Though Lee discusses accurate real-time billing and Mimura discusses quality of service actually provided with regards to service level agreement, Lee in view of Mimura does not explicitly disclose the information gathered on a number of trials and success events.

Pruthi suggests statistical data to be measured for quality and quantity of service analysis and for billing based on such analysis (Pruthi, figure 4 and [0033]).

It would have been obvious to the person having ordinary skills in the art, at the time the invention was made, to have combined examples of statistical information as taught by Lee in view of Mimura and Pruthi together in order to gather necessary information relevant to the contract between provider and subscriber for subscriber's satisfaction (Mimura, [0040]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUPAPORN NILANONT whose telephone number is

(571) 270-5655. The examiner can normally be reached on Monday through Thursday and alternate Friday at 8:30 AM - 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Y. N./
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